REMARKS

Favorable reconsideration of this application as presently amended and in view of the following discussion is respectfully requested.

Claims 77-158 are pending, Claims 77-79, 81, 83-89, 94-96, 98, 99, 101-103, 114, 116-120, 123-127, 129, 133, 136, 137, 139, 143, and 153 having been amended, and Claims 154-158 having been added by way of the present amendment.

In the outstanding Office Action, Claims 91, 93, and 124 were rejected under 35 U.S.C. §112, first paragraph; Claims 77, 121, 122, 133, and 143 were rejected under 35 U.S.C. §112, second paragraph; Claims 77-84, 87-93, 103-112, 116-125, 127, 129, 130, 136, and 153 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck (U.S. Patent No. 3,014,139) in view of Elton et al. (U.S. Patent No. 4,853,565, hereinafter Elton), and further in view of Wood (British Patent No. 1,135,242); Claims 85 and 86 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Mazzorana (French Patent Nos. 2,594,271 and 2,556,146); Claims 94-102, 126, 128, 131-135, 137-144, and 148-152 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Grant (U.S. Patent No. 5,325,008); Claims 113-115 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Siemens (British Patent No. 468,827 (erroneously identified in the outstanding Office Action as a German patent)); and Claims 145-147 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Madsen (U.S. Patent No. 3,932,779).

A courtesy copy of the substitute specification that was filed with the Preliminary Amendment filed on November 27, 1998 is filed herewith (i.e., now filed for a second time). Since it was not indicated in the outstanding Office Action that the previously submitted

substitute specification was entered, please enter this substitute specification. Citations to the specification made herein are made to this substitute specification.

For the Examiner's convenience, a new Abstract of the Disclosure has been provided herewith on a separate sheet of paper. There was no indication in the outstanding Office Action that the Abstract of the Disclosure added by way of the Preliminary Amendment filed on November 27, 1998 had been entered.

The specification has been amended to correct identified informalities.

Applicants respectfully traverse the rejection of Claim 91 under 35 U.S.C. §112, first paragraph. Claim 91 requires that "the sheet of elastic material includes slots formed therein." This feature is discussed in the specification at page 14, lines 5-8 in regard to Figure 4 where it is described that "rubber sheet 14 is suitably provided with slots 15."

In response to the rejection of Claim 93 under 35 U.S.C. §112, first paragraph, a separate letter requesting approval of new drawings is filed herewith, requesting approval to add new Figure 5A. New Figure 5A shows a detail view of a rubber pad (see elements 16b, 16c in Figure 4) having slots formed therein as described in original Claim 17. New Figure 5A is believed to find support in the specification as originally filed, including Claim 17, and thus, no new matter is added. Upon receiving approval for the requested new drawing, and upon receiving a formal notice of allowance, Applicant will file formal drawings, including the requested new drawing.

The specification has been amended to include the requested new figure in the BRIEF DESCRIPTION OF THE DRAWINGS section, and to refer to the requested new drawing in the context of the description of the pad shown therein. The amendments to the specification are believed to find support in the specification as originally filed, including the claims, and thus, no new matter is added. Accordingly, it is respectfully submitted that Claim 93 complies with 35 U.S.C. §112, first paragraph.

Claims 77, 133, and 143 have been amended by way of the present amendment to address the rejection under 35 U.S.C. §112, second paragraph. Claims 77, 119, and 153 have been further amended to clarify that the high-voltage cable is inserted in a first slot, a second slot, and a third slot so as to form a continuous full turn of the stator winding. Claims 78, 79, 81, 83-89, 94-96, 98, 99, 101-103, 114, 116-120, 123-127, 129, 136, 137, 139, and 153 have also been amended to correct identified informalities and to provide antecedent basis in light of the amendments to parent claims. Claims 77-79, 81, 83-89, 94-96, 98, 99, 101-103, 114, 116-120, 123-127, 129, 133, 136, 137, 139, 143, and 153, as amended, are believed to comply with 35 U.S.C. § 112, second paragraph. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned so that mutually agreeable claim language may be identified. The amendments made by way of the present amendment are believed to find support in the specification as originally filed, including the claims, and thus, add no new matter.

Applicants respectfully traverse the rejection of Claims 121 and 122 under 35 U.S.C. §112, second paragraph for lacking proper antecedent basis. Claims 121 and 122 depend from Claim 120 that includes a step of "filling the hose-like element with a pressure medium." Accordingly, Claim 120 includes a "filling" step, and therefore, it is respectfully submitted that reference to "said filling step" in dependent Claims 121 and 122 is proper.

In response to the rejection of Claim 124 under 35 U.S.C. §112, first paragraph, Claim 124 has been amended to describe inserting the hose-like element in at least one of the first slot, the second slot, and the third slot, and in at least another slot "in a forwards and backwards pattern." This feature is discussed in the specification at page 9, lines 7-9 where it is stated that the hose is pulled through "several times, forwards and backwards." Accordingly, it is respectfully submitted that Claim 124, as amended, complies with 35 U.S.C. §112, first paragraph.

New Claims 154-158 have been added by way of the present amendment in order to claim the present invention in varying scope. New Claims 154-158 are believed to find support in the specification as originally filed, including the claims, and thus, add no new matter.

Amended Claim 77 is directed to a rotating electric machine configured to operate at high-voltages. The machine has a stator that is wound with a high-voltage cable drawn through a first slot, a second slot, and a third slot of the stator so as to form a continuous full turn of the stator winding. The high-voltage cable has an insulation system having an inner semiconducting layer, a solid insulation layer surrounding and in electrical contact with the inner semiconducting layer, and an outer semiconducting layer surrounding and in electrical contact with the solid insulation layer. The inner semiconducting layer and the outer semiconducting layer each constitute an equipotential surface. The machine also includes a support member positioned in contact with the stator winding.

Claim 77 is rejected based on a hypothetical machine having a stator and a stator winding of the machine in Shildneck, but substituting the cable in Elton for the stator winding of Shildneck. Furthermore, the hypothetical machine described in the Office Action employs inflatable packing means as described in Wood disposed between the stator of Shildneck and the high voltage cable of Elton. Applicants respectfully traverse this rejection.

Shildneck describes a low-voltage, high-current machine with unconventional windings. As shown in Figures 1-4, the outermost layer of the winding in Shildneck (i.e., element 8 in Figures 1-4) is made of an insulation material.[1] For higher voltages (say over 5 kV – depending of the insulator material used and insulation thickness), it is necessary to take steps to eliminate corona between an insulated conductor and a metallic member. Such corona will form in any small air pocket between the insulation material and stator slot,

[1]See Shildneck, column 3, lines 60-63.

provided that sufficient voltage (3 kV/mm which is the condition for forming a partial discharge path in air) appears across the air space. This is, for example, discussed in US Patent No. 2,613,238 (column 1, a patent cited by Shildneck. It is known to paint a surface of insulated conductors lying in core slots of large electrical machines with semi-conducting material to establish a sheath of reasonably uniform potential at the winding within the stator slot. Despite the fact that this is know, Shildneck does not address the problem of corona discharge, which to some extent could be reduced by using thicker insulation. Instead, one object of Shildneck is to <u>reduce</u> the thickness required in the ground insulation (by providing a round conductor).

In machines operating at higher voltages, as conventional machines which normally operates between 10 and 20 kV, sometimes up to 30 kV, the end portion of the winding is normally provided with an E-Field control in the form or so-called corona protection varnish intended to convert a radial electric field into an axial field, which means that the insulation on the end winding region is subject to a high potential relative to ground. The E-field control evens out the dielectric stress of the insulating material in the end winding region, but an electric field concentration is still a severe problem in electrical machines operating at these higher voltages.

Shildneck does not have any E-field control, which is not surprising for machines that are configured to operate at low voltages, such as the machine in Shildneck. Conventional insulation of conductors in electrical machines (such as so called mica-tape) is produced to some extent to provide resistance to partial discharge. If the ground insulation material as used by Shildneck (silicon rubber), were subjected to partial discharge, it would eventually lead to deterioration of the insulation material. Also, if Shildneck were operated at higher voltages, as conventional machines, the uncontrolled electric field in the end winding region would also result in high electric field concentrations causing a high dielectric stress of the

insulation material, leading to deterioration of the insulation material, and eventual breakdown of the machine. Accordingly, it is respectfully submitted that the cable used in the machine in Shildneck and the machine itself are designed for operation only at low voltages. Moreover, there is nothing in Shildneck suggesting a desirability to modify the cable and/or machine to operate at higher voltages.

The invention of Elton is about an insulator material, namely, a pyrolyzed glass fiber layer that may be used in a variety of applications. For example, Elton describes surrounding conventional bar-type windings of an electric machine with a layer of pyrolyzed glass fiber in electrical contact with ground to minimize corona discharge by providing a path to ground to bleed off built up charges.[2] Elton also describes using a semiconducting pyrolyzed glass fiber layer to equalize the potential on the exterior of the insulator of a cable.[3] Elton describes yet another application of the pyrolyzed glass fiber layer as a way to protect electronic components by coating the exterior surface of a housing with the semiconducting pyrolyzed glass fiber.[4]

However, Elton does not teach or suggest that the cable shown in Figure 7 could be used as a winding in an electric machine. On the other hand, the cable in Elton is but one of several exemplary applications of the pyrolyzed glass fiber layer described in Elton. It appears to be completely coincidental that Elton uses a winding and also a cable (as well as a chassis for an electric circuit) as exemplary uses for the pyrolyzed glass insulator material. There is nothing in Elton to suggest a desirability of using the cable shown in Figure 7 of Elton as a substitute for a conventional bar-type winding in an electric machine.

The outstanding Office Action asserts the motivation for combining Shildneck and Elton would be to "prohibit the development of corona discharge and would equalize the

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[2]See Elton, column 2, lines 44-48, and Figures 1-6.
[3]See Elton, column 7, lines 12-17, and Figure 7.

electrical charge generated between two layers."[5] However, there is nothing in Shildneck to indicate a desirability for a winding having different properties than the cable winding disclosed therein. Moreover, as discussed above, Shildneck is inherently designed for operation at low voltages. Accordingly, there is nothing in Shildneck to suggest a motivation to change the windings in Shildneck, nor anything to suggest that it is feasible to operate with cable windings that operate at high voltage. Further, as discussed above, there is nothing in Elton to suggest a desirability or motivation to use the cable, shown in Figure 7 of Elton, as a winding in an electric machine.

With regard to the stator winding embodiment, Elton recognizes that in the end-winding region, just outside of the stator of an electric machine, there will be problems caused by strong electric fields. As a solution, Elton uses a known grading near the stator to allow some of the accumulated charge to bleed off to the stator, thus reducing the risk of arcing, but Elton offers no other solutions to the problems in the end-winding region. The strong electric fields will be present throughout the end-winding region, not just near the stator. The grading used in Elton will help to lessen the effects of the strong electric fields near the stator, but will not address the problems in the end-winding region away from the stator. Elton uses rigid bar-type windings that are able to withstand mechanical stresses caused by induced fields between the windings in the end-winding region, where electromagnetic fields are not contained in the winding. The mechanical rigidity of the bar-type windings suppress the amount of vibration in the end-winding region that would otherwise be present. The fact that a grading system is used to lessen the end-winding region problems near the stator in Elton is further evidence that Elton does not suggest using the cable of Figure 7 as a winding of a machine, since such a cable would not have a grading.

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[4]See Elton, column 7, lines 38-43, and Figure 8.
[5]See Office Action dated September 29, 2000, at numbered paragraph 10, p. 5.

The "invention" in Elton is the pyrolyzed glass fiber layer. Elton describes a process of immersing the winding portions in a bath of resin and vacuum pressure impregnating (VPI) the resin in the winding.[6] The VPI process results in a cured resin having no voids or gaps between layers.[7] The cured resin is a hard material, which is an important observation, since the basis of the Office Action is that the "flexible" winding of Shildneck would be replaced with a pyrolyzed glass-based cable of Elton.

The cable shown in Figure 7 of Elton includes two pyrolyzed glass fiber layers, layers 104 and 110.

> The internal grading layer 104 is a semi-conducting pyrolyzed glass fiber layer as disclosed herein. . . . An insulation 106 surrounds internal grading layer 104. On the external surface of insulation 106, a semi-conducting pyrolyzed glass fiber layer 110 equalizes the electrical potential thereon.[8]

As further evidence that the cable shown in Figure 7 Elton would not be suitable as a winding in an electric machine, having two cured, pyrolyzed glass fiber layers would cause the cable to be prohibitively stiff for winding through the stator slots. It may be possible to VPI the entire stator in a large resin bath after it had been wound with a flexible cable. However, such a process would apply resin, and cure the resin, for both the internal grading layer 104 and the external layer 110 since an insulation layer 106 surrounds the internal grading layer 104 and both layers 110 and 104 would need to be exposed to the resin and the material hardens, once cured. Accordingly, while Elton describes how to provide a pyrolyzed glass fiber layer for a bar-type winding, Elton does not teach or suggest that the cable of Figure 7 could be used for such a purpose, especially since the cable in Elton would be stiff, not flexible once the pyrolyzed glass material is cured.

For a proper obviousness rejection based on a combination of references, there must be evidence in the references themselves showing that there was a motivation to combine the

[6] See Elton, column 4, lines 23-25.
[7] See Elton, column 4, lines 27-30.

references, or from what was known to one of ordinary skill in the art, not merely that it was feasible to combine the references. It is respectfully submitted that there is no evidence (1) of a desirability to modify the winding used in Shildneck, (2) to suggest that the cable described in Elton could be used as a winding in an electric machine nor (3) that one of ordinary skill in the electric machine art would have a reasonable expectation of success if the machine in Shildneck was modified to operate with cable windings that operate at high voltage.

Consequently, the motivation asserted in the outstanding Office Action is unsupported by any evidence indicating that the proposed combination of Shildneck and Elton is desirable or technically feasible. Accordingly, it is respectfully submitted that one of ordinary skill in the electric machine art would not have been motivated to combine the cable in Elton with the machine in Shildneck.

Wood is asserted for its description of using inflatable packing means for supporting conductors in a stator slot. As shown in Figure 1, bar-type windings 3 are supported in the stator slot 2 by both non-inflatable packers 6" and inflatable tubes 8. Aside from the packing means, there is nothing in Wood that would cure the above-described deficiencies regarding the proposed combination of Shildneck and Elton. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Elton and Wood, the proposed combination fails to teach or suggest the invention defined by independent Claim 77, as amended, or Claims 78-116, and 154-158, dependent therefrom. Because independent Claims 117, 119, and 153, as amended, include the features relevant to the discussion above, it is respectfully submitted that these claims, as well as Claims 118 and 120-152, dependent therefrom, also patentably define over a combination of Shildneck, Elton, and Wood.

Mazzorana is asserted for its teaching of various ways of forming slot shapes. Aside from the various slot shapes, there is nothing in Mazzorana that would cure the above-

[8] See Elton, column 7, lines 19-26.

described deficiencies regarding the proposed combination of Shildneck, Elton, and Wood. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Elton, Wood, and Mazzorana, the proposed combination fails to teach or suggest the invention defined by independent Claims 77, as amended, or Claims 85 and 86, dependent therefrom.

Grant is asserted for its description of using spring members to hold a winding in stator slots. Aside from the springs, there is nothing in Grant that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Elton, and Wood. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Elton, Wood, and Grant, the proposed combination fails to teach or suggest the invention defined by independent Claims 77 and 119, as amended, or Claims 94-102, 126, 128, 131-135, 137-144, and 148-152, dependent therefrom.

Siemens is asserted for its teaching of having winding slots with decreasing radius in order to accommodate winding conductors having varying diameters. Aside from the decreasing radius stator slots, there is nothing in Siemens that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Elton, and Wood. Furthermore, Siemens does not use a continuous full turn of a winding, but "a plurality of individually insulated slot conductors,"[9] which, among other things, facilitates the replacement of damaged conductors.[10] Consequently, it is respectfully submitted that no matter how Shildneck is combined with Elton, Wood, and Siemens, the proposed combination fails to teach or suggest the invention defined by independent Claim 77, as amended, or Claims 113-115, dependent therefrom.

Madson is asserted for its teaching of using relatively thin pressure tubes supplied with a thermosetting resin to expand the tube. The tube is then heated until the resin is

[9] See Siemens, col. 1, lines 19-20.
[10] See Siemens, col. 1, lines 39-40.

hardened, at which point the tube is removed. Aside from this process of forming the support element, there is nothing in Madson that would cure the above-described deficiencies regarding the proposed combination of Shildneck, Elton, and Wood. Consequently, it is respectfully submitted that no matter how Shildneck is combined with Elton, Wood, and Madson, the proposed combination fails to teach or suggest the invention defined by independent Claim 119, as amended, or Claims 145-147, dependent therefrom.

Consequently, in view of the present amendment, the declarations filed herewith, and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 18-36, as amended, is definite and patentably distinguishing over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Bradley D. Lytle
Registration No. 40,073
Thomas J. Fisher
Registration No. 44,681

Tel. No. (703) 413-3000
Fax No. (703) 413-2220
BDL/TJF:

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IN THE CLAIMS

Please amend Claims 77-79, 81, 83-89, 94-96, 98, 99, 101-103, 114, 116-120, 123-127, 129, 133, 136, 137, 139, 143, and 153 as follows:

--77. (Once Amended) A rotating electric machine configured to operate at high-voltages comprising:

a stator having,

a first slot, a second slot, and a third slot; [and]

a stator winding of a high-voltage cable drawn though said first slot, said second slot, and said third slot of said stator so as to form a continuous full turn of said stator winding, said high-voltage cable [winding] having

an insulation system [with] including

a first semiconducting layer,

a solid insulation layer arranged to surround and be in electrical contact with said first semiconducting layer, and

a second semiconducting layer arranged to surround and be in electrical contact with said solid insulation layer; [, said solid insulation positioned between said first semiconducting layer and said second semiconducting layer,] and

a support member positioned in contact with said stator winding, wherein

said first semiconducting layer and said second semiconducting layer [being] are configured to provide respective equipotential surfaces.

78. (Once Amended) The machine of Claim 77, wherein:

at least one of said first semiconducting layer and said second semiconducting layer [having] has a same coefficient of thermal expansion as the solid insulation layer.

79. (Once Amended) The machine of Claim 77, wherein:

[said winding including a cable configured to handle a high-voltage;]

at least one of said first slot, said second slot, and said third slot [having] has a cable lead-through portion of said high-voltage cable disposed therein;

said support member being arranged in at least one of said first slot, said second slot, and said third slot in resilient fixation with the cable lead-through and configured to exert a pressure against said cable lead-through;

said support member being disposed between said cable lead-through and a side wall of the at least one of said first slot, said second slot, and said third slot;

a spring material being positioned between the cable lead-through and the side wall of said at least one of said first slot, said second slot, and said third slot; and

said support member and said spring material are formed as an elongated pressure element running in a same direction as the cable lead-through.

81. (Once Amended) The machine of Claim 79, wherein:

said [elongated pressure element being] support member comprises a tube having a sleeve containing a pressure-hardened material.

83. (Once Amended) The machine of Claim 79, wherein:

said [elongated pressure element including] support member comprises a tube having a sleeve containing a pressurized fluid.

84. (Once Amended) The machine of Claim 79, further comprising:

additional elongated pressure elements, wherein

at least a majority of said elongated pressure element and said additional elongated pressure elements are configured to exert pressure on said cable lead-through and an adjacent cable lead-through.

85. (Once Amended) The machine of Claim 79, wherein:

an axial section of at least one of said first slot, said second slot, and said third slot having a profile with a varying cross-section in which, said side wall and an opposing side wall immediately opposite the cable lead-through each have,

a circular portion that corresponds to an outer diameter of the high-voltage cable, and

a waist portion, being more narrow than said circular portion, and

said elongated pressure element being disposed in said waist [part] portion.

86. (Once Amended) The machine of Claim 85, wherein:

said axial section includes another waist [part] portion being a single-sided waist [part] portion defined on said side wall by a tangential plane to said circular portion and the opposing side wall and a connecting plane situated between and substantially parallel to a corresponding tangential plane and a plane connecting respective centers of the circular portion for the side wall and the opposing side wall, and

said elongated pressure element being arranged at the side wall constituting the tangential plane.

87. (Once Amended) The machine of Claim 79, wherein:

said elongated pressure element, and another elongated pressure element, being arranged on a same side wall of the at least one of said first slot, said second slot, and said third slot.

88. (Once Amended) The machine of Claim 79, wherein:

said elongated pressure member and said spring material being arranged close to a same wall of said at least one of said first slot, said second slot, and said third slot, said spring material being joined to the elongated pressure element.

89. (Once Amended) The machine of Claim 79, wherein:

said elongated pressure element and said spring material being respectively positioned close to different walls of the at least one of said first slot, said second slot, and said third slot.

94. (Once Amended) The machine of Claim 77, wherein:

[said winding further includes a cable configured to carry a high-voltage, and]

a corrugated sheet [surrounding] surrounds at least a portion of the cable lead-through in at least one of said first slot, said second slot, and said third slot.

95. (Once Amended) The machine of Claim 94, wherein:

the corrugated sheet surrounds the high-voltage cable continuously around an entire circumference of the high-voltage cable and along an entire axial length of the high-voltage cable in the at least one of said first slot, said second slot, and said third slot.

96. (Once Amended) The machine of Claim 94, wherein:

a largest diameter of the corrugated sheet being substantially equal to a width of the at least one of said first slot, said second slot, and said third slot; and

a depth of a corrugation in said corrugated sheet being sufficient to absorb a thermal expansion of the high-voltage cable during operation of the machine.

98. (Once Amended) The machine of Claim 94, further comprising:

a casting compound disposed between the corrugated sheet and the at least one of said first slot, said second slot, and said third slot.

99. (Once Amended) The machine of Claim 94, wherein:

the corrugated sheet being formed from a separate tubular corrugated sheet applied around the second semiconducting layer, said second semiconducting layer being an outer semiconducting layer of the high-voltage cable.

101. (Once Amended) The machine of Claim 94, wherein:

a surface of said corrugated sheet having corrugations formed in the second semiconducting layer of the [winding] high-voltage cable, said second semiconducting layer being an outer semiconducting layer.

102. (Once Amended) The machine of Claim 101, wherein:

the corrugations in the second semiconducting layer being oriented in a longitudinal direction of the [winding] high-voltage cable.

103. (Once Amended) The machine of Claim 77, wherein:

[the winding includes a cable configured to carry a high-voltage; and]

said support member includes an elongated elastic support element arranged along and in contact with a cable lead-through of said high-voltage cable disposed in said first slot, said second slot, and said third slot.

114. (Once Amended) The machine of Claim 113, wherein:

the narrow parts being asymmetrically positioned in relation to a central plane running radially through at least one of said first slot, said second slot, and said third [the] slot.

116. (Once Amended) The machine of Claim 103, wherein:

said support element abuts the cable lead-through and an adjacent cable lead-through of the stator winding.

117. (Once Amended) A rotating electric machine configured to operate at high-voltages comprising:

a high-voltage magnetic circuit having,

a magnetic core, and

a stator winding of a high-voltage cable, said high-voltage cable having,

a conductor configured to carry electrical current and having respective strands,

an inner semiconducting layer [disposed around] arranged to surround and be in electrical contact with said conductor,

a solid insulation layer arranged to surround and be in electrical contact with [disposed around] said inner semiconducting layer, and

an outer semiconducting layer arranged to surround and be in electrical contact with [disposed around] said solid insulation layer; and

a support member positioned along and in contact with said stator winding.

118. (Once Amended) The machine according to Claim 117, wherein:

said magnetic core includes a first slot, a second slot, and a third slot in which said high-voltage cable of said stator winding is disposed;

said inner semiconducting layer and said outer semiconducting layer being configured to provide respective equipotential surfaces.

119. (Once Amended) A method for manufacturing a rotating electric machine configured to operate at high-voltages, comprising the steps of:

forming a winding for a stator by positioning a cable in a first slot, a second slot, and a third slot of the stator so as to form a continuous full turn of the winding, said cable being configured to hold a high-voltage and having

an insulation system including

a first semiconducting layer,

a solid insulation layer arranged to surround and be in electrical contact with said first semiconducting layer, and

a second semiconducting layer arranged to surround and be in electrical contact with said solid insulation layer, [said solid insulation positioned between said first semiconducting layer and said second semiconducting layer], said first

semiconducting layer and said second semiconducting layer providing respective equipotential surfaces; and

inserting an elongated support member axially in at least one of said first slot, said second slot, and said third slot and in contact with said cable.

120. (Once Amended) The method of Claim 119, wherein:

said inserting step[,] comprises

inserting a hose-like element as said elongated support element in the at least one of said first slot, said second slot, and said third slot[,]; and

filling the hose-like element with a pressure medium.

123. (Once Amended) The method of Claim 120, wherein:

said inserting step comprises inserting said hose-like element after said cable has been inserted in said at least one of said first slot, said second slot, and said third slot.

124. (Once Amended) The method of Claim 120, wherein:

said inserting step comprises inserting said hose-like element in said at least one of said first slot, said second slot, and said third slot, and in at least another slot in a [to-and-fro] forwards and backwards pattern.

125. (Once Amended) The method of Claim 119, further comprising:

surrounding the cable with a corrugated sheath before inserting the cable into the at least one of said first slot, said second slot, and said third slot.

126. (Once Amended) The method of Claim 125, wherein said surrounding step comprises applying a separate tubular corrugated sheet around the cable before inserting the cable into the at least one of said first slot, said second slot, and said third slot.

127. (Once Amended) The method of Claim 125, wherein:

said surrounding step comprises surrounding the corrugated sheath by applying a separate tubular corrugated sheath in the at least one of said first slot, said second slot, and

said third slot before inserting the cable into the at least one of said first slot, said second slot, and said third slot.

129. (Once Amended) The method of Claim 125, further comprising the step of:

inserting a casting compound between the corrugated sheath and a wall of the at least one of said first slot, said second slot, and said third slot.

133. (Once Amended) The method of Claim 125, wherein:

said surrounding step comprises surrounding the cable with the second semiconducting layer as an outer semiconducting layer, said second semiconducting layer having corrugations; and

[as] said corrugated sheath [surface] comprises the second semiconducting layer.

136. (Once Amended) The method of Claim 119, wherein:

said inserting step comprises inserting said support element in an axial direction after winding the [cable] stator.

137. (Once Amended) The method of Claim 136, wherein:

said inserting step comprises inserting the support element into a space between a cable lead-through of said cable and a wall of at least one of said first slot, said second slot, and said third [said] slot while having said support element maintain a state that enables said support element to pass through a profile of said at least one of said first slot, said second slot, and said third slot without obstruction or resistance in an axial cross-section of said at least one of said first slot, said second slot, and said third slot; and

expanding transversely said support element in an axial direction after said inserting step.

139. (Once Amended) The method of Claim 137, wherein:

said inserting step comprises inserting the support element when surrounding an elongated body along an entire length of the thin walled elastic hose such that a cross-

sectional dimension of said body and said hose, having a void space formed therebetween, and filling said void space with a hardening elastic material after said support element is inserted into [the] at least one of said first slot, said second slot, and said third slot and expanding the hose traversely to the axial direction.

143. (Once Amended) The method of Claim 137, wherein said support element having a cross-sectional profile such that [a] sufficient clearance is provided for inserting said support member [being inserted] into said space[, and allowing a passage into said space].

153. (Once Amended) A rotating electric machine comprising:

a stator having a first slot, a second slot, and a third slot;

a stator winding of a high-voltage cable [winding] disposed in said first slot, said second slot, and said third slot so as to form a continuous full turn of said stator winding, having

means for conducting an electrical current in said high-voltage cable [winding],

means for electrically insulating said means for conducting, said means for electrically insulating having,

means for creating a first equipotential surface around said means for conducting,

means for creating a second equipotential surface around said means for creating the first equipotential surface, and

means for separating said first equipotential surface from said second equipotential surface; and

means for supporting said stator winding in at least one of said first slot, said second slot, and said third slot.--

--ABSTRACT OF THE DISCLOSURE

A rotating electrical machine and method for making the machine, where the machine includes a high-voltage stator winding and elongated support devices for supporting the winding. The machine and method employ an arrangement of cable that is made of inner conductive strands, covered with a first semiconducting layer, which is covered with an insulating layer, which is covered with a second semiconducting layer. The cable is wound in slots in the stator such that separate cable lead-throughs are positioned in specific arrangements with respect to each other and in slots of the stator. The arrangement of the cable in the stator protects the integrity of the respective components in the cable and particularly the second semiconducting layer.--